Vladimir PORTNYKH Q74805
TASK-ORIENTED NONLINEAR HYPER VIDEO
EDITING METHOD AND APPARATUS
THEREFOR
Date Filed July 25, 2003
Darryl Mexic (202) 293-7060
1 of 19

FIG. 1 (RELATED ART)

	TIME
4	
(4)	

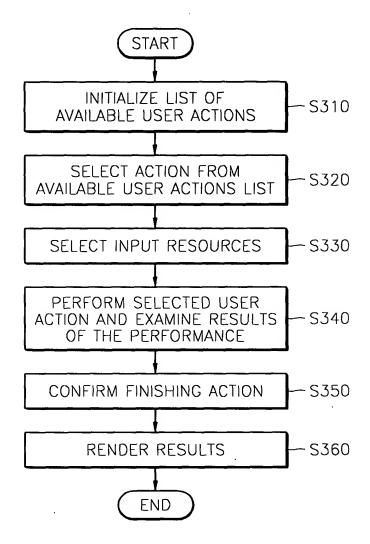
TIME	12345678910	
VIDEO TRACK 1	###########	
TRANSITION	\$\$\$\$\$	
VIDEO TRACK 2	############	
TRANSITION		
VIDEO TRACK 3		
•••		
AUDIO TRACK 1	********	
AUDIO TRACK 2		
ADDITIONAL TRACKS		

FIG. 2 (RELATED ART)

CLIP AREA		CLIP AREA		CLIP AREA		CLIP AREA
	Т		Т		Т	

Vladimir PORTNYKH Q74805 TASK-ORIENTED NONLINEAR HYPER VIDEO EDITING METHOD AND APPARATUS THEREFOR Date Filed July 25, 2003 Darryl Mexic (202) 293-7060 2 of 19

FIG. 3



Vladimir PORTNYKH Q74805 TASK-ORIENTED NONLINEAR HYPER VIDEO EDITING METHOD AND APPARATUS THEREFOR Date Filed July 25, 2003 Darryl Mexic (202) 293-7060 3 of 19

FIG. 4

```
<action name="XXX1" ninput="N1" noutput="N2" userid="XXX2" CLSID="clsid
help="XXX3">
 <input name="YYY1">
       <name="P1"/>
       <name="P2"/>
       <name="PN"/>
 </input>
 <input name="YYY2">
       <name="P1"/>
       <name="P2"/>
       <name="PN"/>
  </input>
 . . . . . .
  <output name="ZZZ1">
       <name="P1"/>
       <name="P2"/>
       <name="PN"/>
  </output>
  <output name="YYY1">
       <name="P1"/>
       <name="P2"/>
       <name="PN"/>
  </output>
  . . . . . .
```

</action>

Vladimir PORTNYKH Q74805 TASK-ORIENTED NONLINEAR HYPER VIDEO EDITING METHOD AND APPARATUS THEREFOR Date Filed July 25, 2003 Darryl Mexic (202) 293-7060 4 of 19

TEMPLATE	ATTRIBUTES	DESCRIPTION	
TRANSFORM TEMPLATE	CLSID	UNIQUE GLOBAL IDENTIFICATION NUMBER	
	mute	WHETHER SOUND IS AVAILABLE OR NOT DURING TRANSITION (TRUE OR FALSE)	
	mstart	START TIME OF TRANSFORM RELATIVE TO MAIN STREAM	
	mstop	STOP TIME OF TRANSFORM RELATIVE TO MAIN STREAM	
RESOURCE TEMPLATE	start	START TIME FOR DISPLAYING RELATIVE TO THE BEGINNING OF REAL CLIP	
	stop	STOP TIME FOR DISPLAYING RELATIVE TO REAL CLIP	
	mstart	START TIME OF DISPLAYING CLIP RELATIVE TO EDITING MODEL	
	mstop	STOP TIME OF DISPLAYING CLIP RELATIVE TO EDITING MODEL	
	src	RESOURCE FILE NAME	
	fname	FILE NAME APPLICABLE IF DESTINATION FILE NAME DIFFERS FROM ORIGIN ONE	
	stream	NUMBER OF STREAMS IN ORIGINAL FILE	
	mute	TRUE OR FALSE DEPENDS IF SOUND IS AVAILABLE OR NOT	
VUNION TEMPLATE	mstart	START TIME OF DISPLAYING CLIP RELATIVE TO EDITING MODEL	
	mstop	STOP TIME OF DISPLAYING CLIP RELATIVE TO EDITING MODEL	
	mute	TRUE OR FALSE DEPENDS IF SOUND IS AVAILABLE OR NOT	
	fname	DESTINATION FILE IF APPLICABLE	

Vladimir PORTNYKH Q74805
TASK-ORIENTED NONLINEAR HYPER VIDEO
EDITING METHOD AND APPARATUS
THEREFOR
Date Filed July 25, 2003
Darryl Mexic (202) 293-7060
5 of 19

```
<action name="SPLIT" ninput="1" noutput="2" userid="0" CLSID="ID_SPLIT"
help="some tips">
 <input name="RESOURCE">
      <name="framerate"/>
      <name="start"/>
      <name="stop"/>
      <name="src"/>
  <name="stream"/>
 </input>
 <output name="VUNION">
 <name="framerate"/>
      <name="start"/>
      <name="stop"/>
      <name="stream"/>
      <name="src"/>
      <name="fname"/>
 </output>
 <output name="VUNION">
      <name="start"/>
      <name="framerate"/>
      <name="start"/>
      <name="stop"/>
      <name="src"/>
      <name="stream"/>
      <name="fname"/>
 </output>
</action>
```

Vladimir PORTNYKH Q74805 TASK-ORIENTED NONLINEAR HYPER VIDEO EDITING METHOD AND APPARATUS THEREFOR Date Filed July 25, 2003 Darryl Mexic (202) 293-7060 6 of 19

```
<action name="TRANSITION" ninput="3" noutput="1" userid="0"
CLSID="ID TRANSITION" O
help="some tips">
 <input name="clip">
      <name="framerate"/>
     <name="start"/>
      <name="stop"/>
      <name="src"/>
      <name="stream"/>
 </input>
 <input name="clip">
      <name="framerate"/>
      <name="start"/>
      <name="stop"/>
      <name="mstart"/>
      <name="src"/>
     <name="stream"/>
 </input>
 <input name="transition">
      <name="clsid"/>
     <name="mute"/>
     <name="start"/>
      <name="stop"/>
 </input>
 <output name="vunion">
     <name="lock"/>
     <name="mute"/>
     <name="mstart"/>
     <name="mstop"/>
     <name="fname"/>
 </output>
</action>
```

Vladimir PORTNYKH Q74805 TASK-ORIENTED NONLINEAR HYPER VIDEO EDITING METHOD AND APPARATUS THEREFOR Date Filed July 25, 2003 Darryl Mexic (202) 293-7060 7 of 19

```
<action name="MERGE" ninput="2" noutput="1" userid="0" CLSID="ID_MERGE"
 help="some tips">
  <input name="clip">
      <name="framerate"/>
      <name="start"/>
      <name="stop"/>
      <name="src"/>
      <name="stream"/>
  </input>
  <input name="clip">
      <name="framerate"/>
      <name="start"/>
      <name="stop"/>
      <name="src"/>
      <name="stream"/>
 </input>
 <output name="vunion">
      <name="lock"/>
      <name="mute"/>
     <name="mstart"/>
     <name="mstop"/>
     <name="fname"/>
 </output>
</action>
```

Vladimir PORTNYKH Q74805
TASK-ORIENTED NONLINEAR HYPER VIDEO
EDITING METHOD AND APPARATUS
THEREFOR
Date Filed July 25, 2003
Darryl Mexic (202) 293-7060
8 of 19

FIG. 9

```
<action name="INSERT" ninput="2" noutput="1" userid="0" CLSID="ID_INSERT"
help="some tips">
 <input name="clip">
      <name="framerate"/>
      <name="start"/>
      <name="stop"/>
      <name="src"/>
      <name="stream"/>
 </input>
 <input name="clip">
      <name="framerate"/>
      <name="start"/>
      <name="mstart"/>
      <name="stop"/>
      <name="src"/>
      <name="stream"/>
 </input>
 <output name="vunion">
      <name="lock"/>
      <name="mute"/>
      <name="mstart"/>
      <name="mstop"/>
      <name="fname"/>
 </output>
```

</action>

Vladimir PORTNYKH Q74805 TASK-ORIENTED NONLINEAR HYPER VIDEO EDITING METHOD AND APPARATUS THEREFOR Date Filed July 25, 2003 Darryl Mexic (202) 293-7060 9 of 19

			
NO.	ACTION NAME	DESCRIPTION	
1	IMPORT RESOURCE	AN EDITING PROCESS DEALS WITH MEDIA RESOURCES, SUCH AS, LOCAL FILES, DV, CAMERA CASSETTES, INTERNET STREAMING RESOURCES, AND THE LIKE. IMPORT RESOURCE MEANS TO MARK THE AVAILABILITY OF RESOURCES UPON EDITING AND RECEIVE A SPECIAL RESOURCE MONIKER AND INFORMATION ABOUT THE RESOURCES.	
2	CLOSE RESOURCE	TO FREE A RESOURCE MONIKER AND MAKE RESOURCES UNAVAILABLE FOR DIRECT EDITING IN SUBSEQUENT STAGES.	
3	DELETE EDITING RESULT	TO DELETE SOME EDITING RESULTS. THIS PROCEDURE HELPS USERS TO STORE ONLY VALUABLE RESULTS.	
4	EXPORT EDITING RESULT	AFTER PERFORMING SOME EDITING ACTIONS, RESULTS MUST BE SAVED IN A SPECIAL FORMAT, SUCH AS, MPEG 2 FORMAT	
5	SPLIT CLIP	TO SPLIT A WHOLE CLIP INTO PIECES THAT START/FINISH AT A CERTAIN TIME	
6	MERGE CLIP	TO MERGE SEVERAL DIFFERENT CLIPS INTO ONE WHOLE CLIP	
7	INSERT CLIP	TO INSERT ONE CLIP, CALLED A SOURCE, AT A CERTAIN TIME INTO ANOTHER CLIP, CALLED A TARGET	
8	DEFINE TRANSFORM	TO ALLOW USER TO DEFINE TRANSFORMS (EFFECT, TRANSITIONS)	

Vladimir PORTNYKH Q74805 TASK-ORIENTED NONLINEAR HYPER VIDEO EDITING METHOD AND APPARATUS THEREFOR Date Filed July 25, 2003 Darryl Mexic (202) 293-7060 10 of 19

FIG. 11

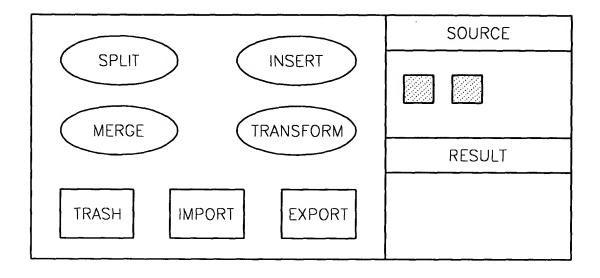
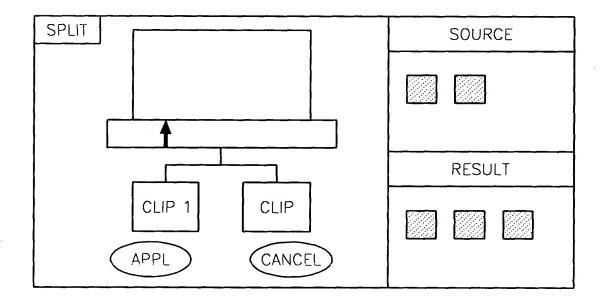


FIG. 12



Vladimir PORTNYKH Q74805 TASK-ORIENTED NONLINEAR HYPER VIDEO EDITING METHOD AND APPARATUS THEREFOR Date Filed July 25, 2003 Darryl Mexic (202) 293-7060 11 of 19

```
<action name="SPLIT" ninput="1" noutput="2" userid="0" CLSID="ID_SPLIT"
 help="some tips">
  <input name="clip">
       <start="0"/>
       <stop="17"/>
       <src="myclip.mpg"/>
  </input>
  <output name="clip">
       <start="0"/>
       <stop="10"/>
       <src="myclip.mpg"/>
  </output>
  <output name="clip">
       <start="10"/>
       <stop="17"/>
       <src="myclip.mpg"/>
 </output>
</action>
```

Vladimir PORTNYKH Q74805 TASK-ORIENTED NONLINEAR HYPER VIDEO EDITING METHOD AND APPARATUS THEREFOR Date Filed July 25, 2003 Darryl Mexic (202) 293-7060 12 of 19

```
<action name="INSERT" ninput="2" noutput="1" userid="0" CLSID="ID_INSERT"
 help="some tips">
  <input name="clip">
        <start="0"/>
       <stop="10"/>
       <src = "targetclip.mpg"/>
  </input>
  <input name="clip">
       <start="0"/>
       <stop="27"/>
       <src = "clip.mpg"/>
  </input>
<output name="vunion">
  <output name="clip">
       <start="0"/>
       <stop="4"/>
       <mstrat="0"/>
       <src = "targetclip"/>
  </output>
  <output name="clip">
       <mstart="4"/>
       <start="0"/>
       <stop="27"/>
       <src = "clip.mpg"/>
  </output>
  <output name="clip">
       <start="4"/>
       <stop="10"/>
       <mstart="31"/>
       <src = "targetclip.mpg"/>
 </output>
</output>
</action>
```

Vladimir PORTNYKH Q74805 TASK-ORIENTED NONLINEAR HYPER VIDEO EDITING METHOD AND APPARATUS THEREFOR Date Filed July 25, 2003 Darryl Mexic (202) 293-7060 13 of 19

<pre><resource> <start =""=""></start> <stop ""="" ==""></stop> <mstart ""="" ==""></mstart> <mstop ""="" ==""></mstop> <src ""="" ==""></src> <fname ""="" ==""></fname> <mute=""></mute=""> <mute=""></mute=""> </resource></pre>	<transform> <clsid=""></clsid=""> <mute=""></mute=""> <mstart=""></mstart=""> <mstop=""></mstop=""> </transform>	<vunion> <mstart=""></mstart=""> <mstop=""></mstop=""> <mute=""></mute=""> <fname=""></fname=""> </vunion>
---	--	--

Vladimir PORTNYKH Q74805 TASK-ORIENTED NONLINEAR HYPER VIDEO EDITING METHOD AND APPARATUS THEREFOR Date Filed July 25, 2003 Darryl Mexic (202) 293-7060 14 of 19

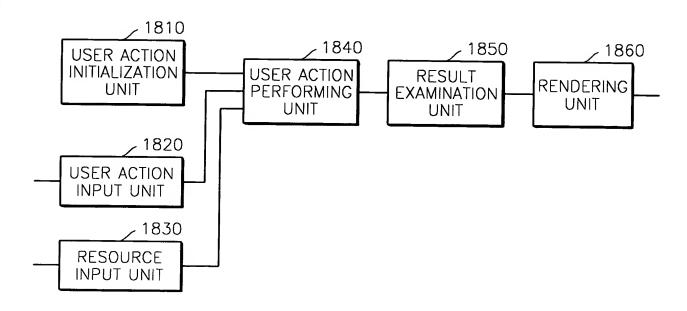
```
<VUNION>
      < mstart = 1/>
      < mstop = 31/>
      <VUNION/>
         <mstart=0/>
         < mstop = 33/>
         <RESOURCE'>
               <src="AAA.AVI"/>
               < mstart = 0/>
               < mstop = 4/>
    </RESOURCE>
    <RESOURCE>
               <src="BBB.AVI"/>
               < mstart = 0/>
               < mstop = 23/>
               <start=4/>
    </RESOURCE>
    <RESOURCE>
               <src="AAA.AVI"/>
               < mstart = 27/>
               < mstop = 33/>
    </RESOURCE>
  </VUNION>
</VUNION>
```

Vladimir PORTNYKH Q74805 TASK-ORIENTED NONLINEAR HYPER VIDEO EDITING METHOD AND APPARATUS THEREFOR Date Filed July 25, 2003 Darryl Mexic (202) 293-7060 15 of 19

```
<VUNION/>
   <mstart=1>
   < mstop = 31 >
   <RESOURCE>
       <src="AAA.AVI"/>
       <mstart=1>
       < mstop = 4/>
   </RESOURCE>
   <RESOURCE>
       <src="BBB.AVI"/>
       < mstart = 0/>
       < mstop = 23/>
       <start=4/>
   </RESOURCE>
   <RESOURCE>
       <src="AAA.AVI"/>
       <mstart=26>
       < mstop = 31 >
   </RESOURCE>
</VUNION>
```

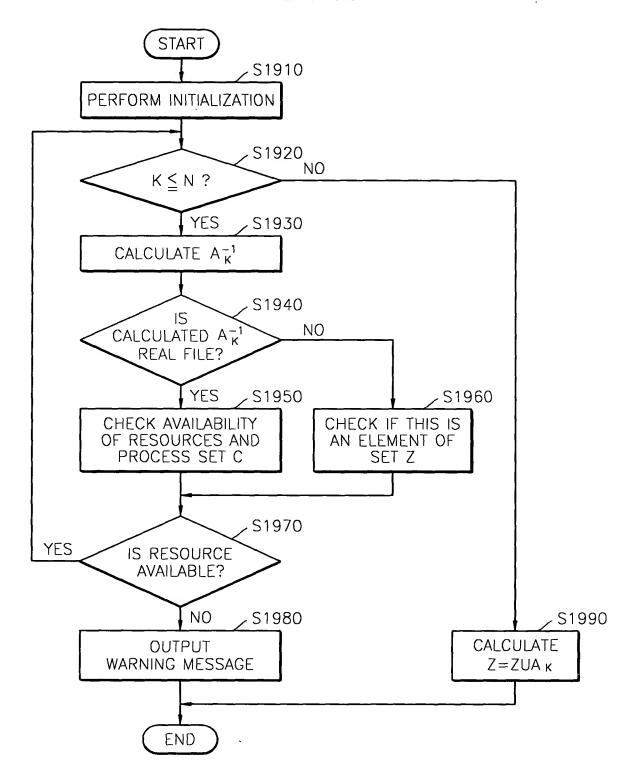
Vladimir PORTNYKH Q74805 TASK-ORIENTED NONLINEAR HYPER VIDEO EDITING METHOD AND APPARATUS THEREFOR Date Filed July 25, 2003 Darryl Mexic (202) 293-7060 16 of 19

FIG. 18



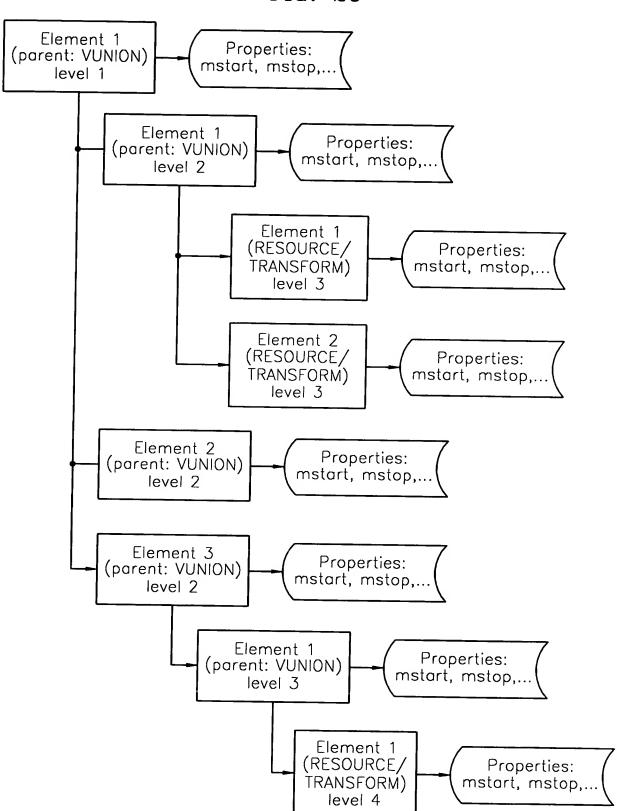
Vladimir PORTNYKH Q74805 TASK-ORIENTED NONLINEAR HYPER VIDEO EDITING METHOD AND APPARATUS THEREFOR Date Filed July 25, 2003 Darryl Mexic (202) 293-7060 17 of 19

FIG. 19



Vladimir PORTNYKH Q74805 TASK-ORIENTED NONLINEAR HYPER VIDEO EDITING METHOD AND APPARATUS THEREFOR Date Filed July 25, 2003 Darryl Mexic (202) 293-7060 18 of 19

FIG. 20



Vladimir PORTNYKH Q74805 TASK-ORIENTED NONLINEAR HYPER VIDEO EDITING METHOD AND APPARATUS THEREFOR Date Filed July 25, 2003 Darryl Mexic (202) 293-7060 19 of 19

FIG. 21

